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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/781,910

02/20/2004

Eric Peyrucain

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EXAMINER

LEE, BENJAMIN P

ART UNIT

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/781,910	<b>Applicant(s)</b> PEYRUCAIN ET AL.	
	<b>Examiner</b> BENJAMIN P. LEE	<b>Art Unit</b> 3641	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 13 November 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 21-36 is/are pending in the application.
- 4a) Of the above claim(s) 25-36 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 21-24, 37 and 38 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |                                                                                      |                                                                   |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____                                                          | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

1. Currently, claims 1-20 are canceled; claims 21-24, 37 and 38 are rejected; and claims 25-36 are withdrawn.

### ***Response to Arguments***

2. Applicant's arguments filed 7/25/2007 have been fully considered but they are not persuasive. Applicant argues that the invention of GIBBS et al and HARENBERG et al, considered alone or together, fail to teach a method that incorporates displaying a plurality of non-precision landing approaches in accordance with verified conditions relating to the precision of measurements of parameters used in implementing the non-precision landing approach. In response, Examiner assert that GIBBS et al teach an apparatus that determines the operational availability of systems and how they are performing to assist in landing an aircraft where a computer system uses "data sources" (navigational or avionics sources meant to include those navigational and avionics sources known to be utilized on airliners) to provide a list, that is displayed on a monitor, of approved approaches pertaining to an airports runways and prioritize the approaches based on both precision and non-precision approaches (col. 7, lines 58-67).

HARENBERG et al teach a performance and failure assessment monitor to display to the pilot the operational availability of systems (navigational and avionics) and how the systems are performing to assist the pilot in landing the aircraft (col. 3, lines 38-50).

Further, HARENBERG et al teach that the monitor assesses the flight instruments to

verify if they are generating "good information" (representative of actual state of aircraft) (col. 6, lines 1-33). Examiner respectfully assert that the combination of GIBBS et al and HARENBERG et al teach applicant's invention as currently claimed.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
  2. Ascertaining the differences between the prior art and the claims at issue.
  3. Resolving the level of ordinary skill in the pertinent art.
  4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
3. Claims 21-24, 37 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gibbs et al (6,856,864) in view of Harenburg (3,789,356).
4. Gibbs et al teaches a method to assist the piloting of an aircraft comprising (b) selecting on the basis of flight conditions, one of a plurality of different non-precision approach categories (Col. 6, lines 10-45; Col. 7, lines 1-2; Col. 7, lines

11-29, Col. 8 lines 8-17; Col 8. line.31, Col. 8, lines 34-36);

(c) presenting the selected approach category on a display screen (114; Col. 4, lines 12- " 20; Col. 8, lines 21-23)

wherein each non-precision approach category define the approach mode or modes that are possible from among a plurality of approach modes including a plurality of assisted approach modes and a selected approach mode (see col. 8, lines 8-17).

5. Gibbs teaches that it is necessary to monitor and verify a plurality of data sources prior to the selection of a landing/approach mode. Specifically Gibbs teaches in Col. 4, lines 45: 52, "Data sources 108 include various types of data required by the system, for example, state of the aircraft data, flight plan data, data related to the airways, waypoint and associated procedures, navigational aids, symbol textures, navigational data, obstructions, o font textures, taxis registration, specials use aircraft...."

6. The examiner asserts that Gibbs teaches that a pilot may choose any one of the various possible assisted approach modes that are given to him/her as options.

7. Gibbs does not specifically teach verifying:

Two FMC are functioning correctly;

GPS receivers are functioning correctly;

Two IRS are functioning correctly;

Landing assistance receivers are functioning correctly;

The aircraft altitude has a greater precision than a predetermined value;

However, Harenberg et al disclose a performance and failure assessment monitor # 12.

The failure assessment monitor is connected to "literally hundreds of inputs from sensors (each necessarily having their own circuitry and control) throughout the aircraft.

The monitor operates on these inputs to generate signal representative of the position of the aircraft with respect to the runway. (see Col. 1, lines 58-65). Necessarily the autopilot of Harenberg would include: gyroscopes, air temperature sensors, wind speed sensors, fuelgauges, airspeed, groundspeed, altitude sensors, and horizontal distance sensors. It would have been obvious to one having ordinary skill in the art to verify that the aircraft sensors are operating properly before determining an approach mode since the approach mode is dependant upon these sensors functioning properly.

In regards to the number of FMC, GPS receivers, IRS, the examiner takes OFFICIAL NOTICE that it is well known to provide redundant receivers and computers in an aircraft in order to increase the safety and reliability of the aircraft.

It would have been obvious to one having ordinary skill in the art at the time of the invention to provide a redundant FMC, GPS receivers and IRS in order to increase the safety of the passengers and crew on board the aircraft.

### ***Summary/Conclusion***

8. Claims 21-24, 37 and 38 are rejected.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Benjamin P. Lee whose telephone number is 571-272-8968. The examiner can normally be reached between the hours of 8:30am and 5:00pm on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Carone can be reached on 571-272-6873. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status

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information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/B. P. L./

Examiner, Art Unit 3641

/John Woodrow Eldred/

Primary Examiner, Art Unit 3641